



Shell Canada Limited

Material Safety Data Sheet

Effective Date: 2006-05-31

Supersedes: 2003-09-22

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: **SHELLZONE* UNIVERSAL ANTIFREEZE/COOLANT**
SYNONYMS: Ethylene Glycol Blend
PRODUCT USE: Engine Coolant

SUPPLIER

Shell Canada Limited
P.O. Box 100, Station M
400-4th Ave. S.W.
Calgary, AB Canada
T2P 2H5

TELEPHONE NUMBERS**Shell Emergency Number**

1-800-661-7378

CANUTEC 24 HOUR EMERGENCY NUMBER

613-996-6666

For general information:

1-800-661-1600

For MSDS information:

403-691-3982

(From 7:30 to 4:30 Mountain Time)

403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

2. COMPOSITION / INFORMATION ON INGREDIENTS

THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE.
See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Liquid Clear Green Colour Mild Odour.**Routes of Exposure:** Exposure will most likely occur through skin or eye contact.**Hazards:**

Ethylene glycol is more acutely toxic to humans than to animals. The estimated lethal dose is 100 millilitres. Renal damage has been observed in humans following ingestion.

May be irritating to eyes.

Ingestion of this product may cause headache, dizziness, fatigue and central nervous system depression.

May be irritating to skin. Contact with product at elevated temperatures can result in thermal burns to skin.

Due to its low vapour pressure, product is unlikely to be an inhalation hazard at ambient temperatures. High vapour or aerosol mist concentrations may be irritating to the nose, throat and upper respiratory tract.

For further information on health effects, see Section 11.

4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention.

Skin:	Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.
Ingestion:	Do not give anything by mouth to an unconscious person. DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs.
Inhalation:	Remove victim from further exposure and restore breathing, if required. If irritation persists or if toxic symptoms are observed, get medical attention.
Notes to Physician:	Treatment of exposure should be directed at the control of symptoms and the clinical condition. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered. Early administration of ethanol may counter the principal toxic effects of ethylene glycol (ie. kidney damage and metabolic acidosis).

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Dry Chemical Carbon Dioxide Foam Water Fog
Firefighting Instructions:	Material will not burn unless preheated. Caution, spilled material is slippery. Do not use a direct stream of water as it may spread fire. Water or foam may cause frothing. Use water to cool fire exposed containers. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus.
Hazardous Combustion Products:	CO, aldehydes, ketones, acids and unidentified organic compounds on combustion.

6. ACCIDENTAL RELEASE MEASURES

Isolate hazard area and restrict access. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Dike and contain land spills; contain water spills by booming. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).

7. HANDLING AND STORAGE

Handling:	Avoid prolonged or repeated contact with skin. Avoid inhalation of vapours, mists or aerosols which are produced when product is handled at elevated temperatures or mechanically generated into the air. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene.
Storage:	Store in a cool, dry, well ventilated area, away from heat and ignition sources.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The following information, while appropriate for this product, is general in nature. The selection of personal protective equipment will vary depending on the conditions of use.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

North American exposure limits have not been established for the product. Consult local authorities for acceptable provincial values.

Ethylene Glycol, aerosol: 100 mg/m³ (TLV/Ceiling)

Mechanical Ventilation: Concentrations in air should be maintained below the recommended threshold limit value if unprotected personnel are involved. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. Make up air should always be supplied to balance air exhausted (either generally or locally).

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Skin Protection: Avoid contact with skin. Impervious gloves (viton, nitrile, PVC, neoprene) should be worn at all times when handling this product. Impervious clothing (apron, coveralls) should also be worn in confined workspaces or where the risk of skin exposure is much higher.

Respiratory Protection: Not normally required under intended conditions of use. Depending on airborne concentration, use either a NIOSH-approved chemical cartridge respirator with organic vapour cartridges in combination with a P95 particulate filter or use a NIOSH-approved supplied-air respirator, either self-contained or airline, operated in positive pressure mode.

9. PHYSICAL DATA

Physical State:	Liquid	Odour:	Mild Odour.
Appearance:	Clear Green Colour	Odour Threshold:	Not available
Pour Point, °C :	Freeze Point -13 °C	Boiling Point, °C :	197 °C
Vapour Pressure (absolute):	0.05 mm Hg @ 20 °C	Vapour Density (air = 1):	2.1
Density:	Not available	Flash Point, °C :	Tag Closed Cup 116 °C
Specific Gravity (Water = 1):	1.115 - 1.145	Lower Explosion Limit:	3.2 % (vol.)
pH:	9 - 11	Upper Explosion Limit:	15.3 % (vol.)
Viscosity:		Autoignition Temperature, °C:	Not available
Evaporation Rate (n-BuAc = 1):	Not available	Partition Coefficient (K_{ow}):	Not available
Water Solubility:	Soluble	Molecular Weight:	

10. STABILITY AND REACTIVITY

Chemically Stable:	Yes	Hazardous Polymerization:	No
Sensitive to Mechanical Impact:	No	Sensitive to Static Discharge:	No
Incompatible Materials:	Avoid strong oxidizing agents. Acids, Bases		
Conditions of Reactivity:	None currently known.		

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:	Exposure will most likely occur through skin or eye contact.
Irritancy:	This product is not a primary skin irritant after exposure of short duration, is not a skin sensitizer and is not irritating to the eyes.
Acute Toxicity:	Ethylene glycol is more acutely toxic to humans than to animals. The estimated lethal dose is 100 millilitres. Renal damage has been observed in humans following ingestion.
Chronic Effects:	Long term dietary intake of ethylene glycol has produced bladder stones as well as kidney and liver damage and deposition of calcium salts in various tissues.

Feto/Teratogenicity: Causes fetotoxicity in animals; considered to be secondary to maternal toxicity in humans.

Pre-existing Conditions: Pre-existing kidney disease may be aggravated by exposure to this product.

12. ECOLOGICAL INFORMATION

Environmental Effects: Ethylene glycol is harmful to aquatic life in high concentrations. Block off drains and ditches. Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

Biodegradability: Potentially biodegradable. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

14. TRANSPORTATION INFORMATION

Canadian Road and Rail Shipping Classification:

This product is not regulated under the Canadian Transportation of Dangerous Goods Regulations for transport by road and rail.

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* (CPR) and the MSDS contains all the information required by the CPR.

DSL/NDL Status: THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE.
This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act.

Other Regulatory Status: No Canadian federal standards. Contact provincial environmental authorities to identify applicable legislation.

16. ADDITIONAL INFORMATION

Revisions: This MSDS has been reviewed and updated.
Changes have been made to:

- Section 1
- Section 2
- Section 3
- Section 4
- Section 5
- Section 8
- Section 11
- Section 6